



**United States
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TO: All Interested Parties

FROM: Rebecca A. Ramsey
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THROUGH: Dean Jensen, Chief
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SUBJECT: Review of Ready-to-eat Breakfast Cereals Procured for Domestic Household Food Assistance Programs

Earlier in 2000, Commodity Operations began a review of the ready-to-eat breakfast cereals used in the domestic household food assistance programs. This review was prompted as a response to many complaints received from the recipients about the taste and hardness of some of the cereals. The study was conducted to verify that the problem did exist, and if so, determine the extent to which it spread. Sensory evaluations were conducted in each of the seven distribution regions and represented each of the household programs: Food Distribution Program on Indian Reservations (FDPIR), The Emergency Food Assistance Program (TEFAP), and the Commodity Supplemental Feeding Program (CSFP).

We are happy to report that steps have been taken to ensure that only top quality products are procured for the programs. Though it may take some time before the changes are seen at the distribution sites, please know that the improvements are coming!

The final report from this review is enclosed. If you have any questions about this report or the cereals, please contact Ms. Rebecca Ramsey at (202) 690-2534.

Enclosure

**REVIEW OF READY-TO-EAT CEREALS
PROCURED FOR DOMESTIC HOUSEHOLD
FOOD ASSISTANCE PROGRAMS.**

Summer 2000

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I. INTRODUCTION

Each year millions of dollars of Federal funding is spent in an effort to alleviate hunger in the United States and its territories. Through programs such as the National School Lunch Program, the Women, Infants, and Children program, and the Food Stamp program, thousands of women, infants, children, elderly, and needy people receive some form of food assistance. The administration of these programs, and the many others available, requires an extensive network of Federal, State and local Governments, private organizations, and dedicated people.

The U.S. Department of Agriculture (USDA) takes on many roles in this process—from administration of the programs on a national level, to procuring the foods for the programs, to ensuring the quality and safety of those foods. The Food and Nutrition Service (FNS) of USDA handles the national administration of the programs. The Farm Service Agency (FSA) procures processed dairy products, and whole and processed grain products. Other agencies within USDA conduct inspections and procure other food products. This is just a small portion of the network of people involved in these food assistance programs. In the course of administering food assistance programs, this network ensures that the foods are safe, nutritious, and of good quality. Plant inspections, product testing, and recipient feedback are all utilized to ensure that the commodities are meeting the program needs. Plant inspections or audits and product testing help ensure that only safe food products reach the consumer. However, these inspections do not evaluate the sensory acceptability of the foods. Sensory information includes subjective quality criteria such as taste (or flavor), texture, and overall acceptability. Recipient feedback on sensory acceptability can be obtained two ways: customer complaints and direct solicitation.

Customer complaints are valuable in that they provide program administrators with insight into the sensory acceptability of the commodities and can facilitate the removal of unacceptable product from distribution; however, they do not always prevent an unacceptable product from reaching the consumer. Sensory evaluation, or taste testing, allows for direct customer feedback under controlled situations. Conducting a sensory evaluation prior to purchasing a product is one way that program administrators could be assured that only product which the recipients deem acceptable will be provided.

Over the years, the variety of foods supplied to the various programs has expanded to include many ready-to-eat products, including ready-to-eat cold cereals (RTE cereals). The RTE cereals used in the household programs include: oat circles, corn flakes, corn squares, bran flakes, and rice crisps. While these cereals have been accepted enthusiastically by program participants, they have also generated some complaints. Complaints have tended to center around the texture of the cereal being too hard or not softening in milk. Since many of the commodities are provided to children and elderly, this can be a serious complaint. The Commodity Operations of the FSA proposed that a review be conducted of the RTE cereals to ascertain the extent of the problems. The primary component was a sensory evaluation of the RTE cereals designed to obtain feedback from the program participants.

II. HOUSEHOLD PROGRAMS

There are many humanitarian food assistance programs administered through the Food and Nutrition Service of the U.S. Department of Agriculture (USDA). Each of the programs fill a different need within the communities. For the purposes of evaluating the ready-to-eat cereals, we focused primarily on the household distribution programs: Commodity Supplemental Feeding Program (CSFP), The Emergency Food Assistance Program (TEFAP), and the Food Distribution Program on Indian Reservations (FDPIR).

Commodity Supplemental Feeding Program (CSFP)

The CSFP works to improve the health of low-income pregnant and breastfeeding women, other new mothers up to 1 year postpartum, infants, children up to age 6, and elderly people at least 60 years of age by supplementing their diets with nutritious USDA commodity foods. It provides food and administrative funds to States to supplement the diets of these groups.

The population served by CSFP is similar to that served by USDA's Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), but CSFP also serves elderly people, and provides food rather than the food vouchers that WIC participants receive. Eligible people cannot participate in both programs at the same time.

CSFP food packages do not provide a complete diet, but rather are good sources of the nutrients typically lacking in the diets of the target population.

CSFP is administered at the Federal level by the Food and Nutrition Service (FNS), an agency of the USDA. The program is authorized under Section 4(a) of the Agriculture and Consumer Protection Act of 1973. Federal regulations covering CFSP can be found in 7 CFR, Parts 247 and 250.

An average of more than 370,000 people each month participated in the program in fiscal year (FY) 1998, including more than 243,000 elderly people and more than 127,000 women, infants, and children.

In FY 1999, CSFP ordered 3,387,266 pounds of cereals for use nationwide.

The Emergency Food Assistance Program (TEFAP)

TEFAP is a Federal program that helps supplement the diets of low-income Americans, including elderly people, by providing them with emergency food and nutrition assistance at no cost. Under TEFAP, commodity foods are made available by the USDA to States. States provide the food to local agencies that they have selected, usually food banks, which in turn, distribute the food to soup kitchens and food pantries that directly serve the public.

These organizations distribute the commodities for household consumption or use them to prepare and serve meals in a congregate setting. Recipients of food for home use must meet income eligibility criteria set by the States.

TEFAP is administered at the Federal level by USDA's Food and Nutrition Service. State agencies receive the food and supervise overall distribution. TEFAP was first authorized as the Temporary Emergency Food Assistance Program in 1981 to distribute surplus commodities to households. The name was changed to The Emergency Food Assistance Program under the 1990 farm bill. The program was designed to help reduce Federal food inventories and storage costs while assisting the needy.

Stocks of some foods held in surplus had been depleted by 1988. Therefore, the Hunger Prevention Act of 1988 authorized funds to be appropriated for the purchase of commodities specifically for TEFAP. Foods acquired with appropriated funds are in addition to any surplus commodities donated to TEFAP by USDA.

In FY 1999, TEFAP ordered 2,985,568 pounds of cereal for use nationwide.

The Food Distribution Program on Indian Reservations (FDPIR)

FDPIR is a Federal program that provides commodity foods to low-income households, including the elderly, living on Indian reservations, and to Native American families residing in designated areas near reservations. Many Native Americans participate in the FDPIR as an alternative to the Food Stamp Program, usually because they do not have easy access to food stores.

The program is administered at the Federal level by FNS, an agency of USDA, in cooperation with 98 Indian Tribal Organizations and six State agencies.

FDPIR is authorized under Section 4(b) of the Food Stamp Act of 1977, and Section 1336 of the Agriculture and Food Act of 1981. Federal regulations governing the program can be found at 7 CFR, Parts 250, 253, and 254.

In FY 1999, FDPIR programs ordered 678,776 pounds of cereals for use nationwide.

III. VENDORS

There are currently five cereal types available: rice crisps, corn flakes, corn squares, bran flakes, and oat circles. There are presently three active vendors, although any commercial cereal producer is eligible to participate. The three vendors are: Company A (rice crisps, corn flakes, corn squares, and oat circles), Company B (rice crisps, corn flakes, and bran flakes), and Company C (rice crisps, corn flakes, corn squares, oat circles, and bran flakes).

The vendors participate in the program through a process of sealed bidding. Invitations for bids are sent out on a quarterly basis requesting which cereal types and quantities are to be offered. Vendors then submit their bids to the Kansas City Commodity Office (KCCO) which evaluates the bids. Many factors are considered during the extensive evaluation process such as amount offered, destination, and total landed cost. KCCO then awards the contract to the vendor(s) which will result in the lowest-landed cost for the product.

Vendors must be considered responsible and have sufficient means for producing the product if they wish to participate in the bid process. All products must be of U.S. origin, high quality, and safe. RTE cereals must be of the same quality as offered on the commercial market, and can either be packed in a generic package designed by USDA, or in the vendor's own commercial packaging. Company B and Company C both package their cereals in their commercial package, and Company A uses USDA packaging.

Current procurement specifications focus on proximate analysis results, including moisture, fat, and sugar content. The specifications assume that all products meeting those stated specifications will be acceptable. There is no component to consider customer satisfaction with the cereal. Cost is the primary factor when determining an award.

IV. COMPLAINTS

Over the past 3 years, program participants and program staff have been able to call complaints in to the Complaint Hotline at KCCO. This Complaint Hotline has allowed KCCO to obtain valuable feedback from the programs in a timely manner, and facilitate relaying the information to the vendors so that improvements can be made to the products. The following table lists the complaints received between FY 1998 and year-to-date FY 2000.

FY	RTE Cereal Type	Vendor	Problem
1998	Oats	Company A	8-9 cases of product were damaged
1998	Rice	Company A	Recipient found glass in product
1999	Corn	Company A	Recipients aren't happy with product; product is very hard
1999	Corn	Company A	Recipient alleges her upper plate was broken when she bit on hard cereal.
1999	Oats	Company A	Several recipients complained product is hard and will not soften in milk
1999	Oats	Company A	Incorrect commodity code on box
1999	unknown	Company C	Possible contamination
2000	corn flake	Company A	Product is extremely hard; RAs are returning product
2000	corn flake	Company A	Product shipped on slip sheets instead of pallets
2000	oats	Company A	Product contains correct product; however, label on container had incorrect product code
2000	rice	Company A	Product contains correct product; however, label on container had incorrect product code

In 1999, Company A was notified of the complaints about the hardness of the cereal. The company responded by changing the cutter speed to decrease that thickness of the flake. However, participants continue to report hard flakes despite the change. The new formulation was used in this study.

Two other customer complaints were sent directly to Representative Bart Stupak of Michigan (FY 2000), and to Senator Chuck Hagel of Nebraska (FY 2000), both involving Company A cereals. Those letters and the replies to the Congressmen are included in Appendix A.

V. SENSORY EVALUATION

The sensory evaluation was conducted between May and July 2000. Single sites from all seven regions were chosen so that all three programs were represented in the sensory evaluation. The sites and respective programs are listed below.

SITES:

REGION	CITY	PROGRAM
Midwest	St. Paul, MN	CSFP
Mid-Atlantic	Washington, DC	CSFP
Southeast	Cherokee, NC	FDPIR and TEFAP
Northeast	Concord, NH	CSFP and TEFAP
Western	Sacramento, CA Orange County, CA	CSFP and TEFAP
Southwest	Tahlequah, OK	FDPIR
Mountain Plains	Fort Totten, ND	FDPIR

PARTICIPANTS

At each site, participants were encouraged to taste a cereal and provide feedback on a short questionnaire. All age ranges were encouraged to participate, resulting in an age range of 6 years to 80+ years. While it was encouraged that participants try more than one cereal type, it was not required. In cases where the participant was unable or unwilling to read and answer the questionnaire on their own, the questions were asked and answers recorded by the testers. Optional surveys about cereal consumption patterns and habits were also available. Participants were encouraged to complete the survey as well, but again this was not mandatory.

PROTOCOL

Approximately 2-3 ounces of cereal was placed in small cups which were then labeled with a three or four digit random code. The code was recorded separately with the corresponding cereal type and vendor. Boxes were hidden from participants to ensure that brand recognition did not enter into the evaluations. Milk was provided and participants were encouraged to try the cereals both dry and in milk before completing the questionnaire.

COMPILATION OF RESULTS

Once all the testing had been completed, the results were compiled for each site, and then as a composite of all the sites. The site results will be sent to each site for their reference. The composite results will be used for the remainder of the report.

Survey results were compiled only on a composite basis and are provided for reference.

SURVEY RESULTS

The survey form is shown in Appendix B. There were a total of 108 respondents to the survey.

The first question on the optional survey asked, “In the last 3 months, how often did you eat a cold cereal?” Of the 108 respondents, 88% consumed a RTE cold cereal at least once per week, and 45% had RTE cereals more than five times per week.

The second question asked, “What types of cold cereals do you typically prefer or eat (mark all that apply)?” Many people anecdotally indicated consuming many sugar-coated cereals in addition to the cereals on the list. Of the cereals on the list wheat bran flakes were the most often chosen at 43.5%. Other cereals included corn flakes (42.6%), oat circles (38.9%), puffed rice (32.4%), corn squares (21.3%), shredded wheat (16.7%), and granola (7.4%), oat flakes (7.4%), and other (18.5%).

The third question asked, “How do you typically eat your cereal?” Possible answers included “always with milk” (56.5%), “mostly with milk, sometimes dry” (33.3%), “mostly dry, sometimes with milk” (9.3%), and always dry (0.9%).

The fourth question asked “When do you typically eat your cereal? (Mark all that apply)” Possible answers included breakfast (95.4%), as a snack (50.9%), and other meals (35.2%). Many respondents also indicated using cereals in various recipes, such as casseroles and cereal bars.

QUESTIONNAIRE RESULTS

There are a total of four questions on the questionnaire. Three of the four questions have two parts, allowing for review of the cereal both dry and in milk. The fourth question is for an overall rating of the cereal.

The form can be found in Appendix B. The questions, possible answers, and point values are shown below.

QUESTION	POSSIBLE ANSWERS (Pt. Value)
1(a). How crunchy is the cereal without milk (dry)?	Not crunchy at all (1) Slightly crunchy (2) Moderately crunchy (3) Very crunchy (4)
1(b). How crunchy is the cereal in milk?	
2(a). What is your opinion of this cereal's crunchiness without milk?	Dislike extremely (1) Dislike very much (2) Dislike moderately (3) Dislike slightly (4) Neither like nor dislike (5) Like slightly (6) Like moderately (7) Like very much (8) Like extremely (9)
2(b). What is your opinion of this cereal's crunchiness in milk?	
3(a). What is your opinion of this cereal's taste without milk?	
3(b). What is your opinion of this cereal's taste in milk?	
4. What is your overall rating of this cereal?	

The form was completed for each cereal a participant tasted. The answers were then compiled and results averaged for each cereal type and vendor. To obtain a composite score, questions 2(a), 2(b), 3(a), 3(b), and 4 were averaged together. The point scale for those questions range from 1 to 9 with a score of 6.0 being the lowest acceptable score. Scores below this indicate a low consumer acceptability of a given cereal. The average scores are shown in the following table.

Table of Questionnaire Results:

CORN FLAKES									
Vendor	# responses	1(a)	1(b)	2(a)	2(b)	3(a)	3(b)	4	Comp.
Company A	41	3.7	3.0	5.6	5.2	5.5	5.3	5.4	5.4
Company B	20	3.4	3.1	7.5	7.6	7.4	7.6	7.6	7.5
Company C	24	3.3	2.9	7.7	6.7	7.4	7.2	7.4	7.3
CORN SQUARES									
Company A	10	3.5	3.3	5.5	6.3	5.9	5.7	5.6	5.8
Company C	23	3.4	2.9	7.4	6.6	7.8	7.3	7.7	7.3
OAT CIRCLES									
Company A	33	3.5	3.3	4.4	4.9	4.8	5.3	4.8	4.9
Company C	13	3.4	3.2	7.1	7.5	7.2	7.7	7.7	7.4
RICE CRISPS									
Company A	26	3.5	3.2	5.5	5.5	5.3	5.9	5.3	5.5
Company B	17	3.0	3.1	6.8	7.4	7.6	7.6	7.4	7.4
Company C	23	3.5	3.0	7.1	6.9	7.2	7.4	7.3	7.2
WHEAT BRAN FLAKES									
Company B	26	3.3	2.6	7.5	7.5	7.7	7.6	8.0	7.7
Company C	13	2.8	2.9	6.7	7.8	6.8	7.4	7.5	7.2

DISCUSSION:

Company A was the only vendor to score below the minimum requirement of 6.0 on questions 2 through 4 and on the composite average for all their cereals. Both Company B and Company C scored above the 6.0 requirement on all the questions and on the composite average. Company B scored above 7.0 on all but one question which they scored in the 6.8, with composite scores above 7.0 on all their cereals. Company C's scores ranged from 6.6 to 7.8 on all the questions, with composite scores above 7.0 points for all their cereals.

It does not appear from the data that crunchiness was a factor in Company A's low scores since all the companies scored comparably on question 1 which dealt with crunchiness. However, it should be noted that there were a significant number of comments indicating that the Company A cereals were harder than the other cereals and did not soften in milk. A suggestion was made to expand the possible answers for question 1, and to provide references as to how "crunchy" was defined (i.e., very crunchy = raw carrot sticks). For this report, the values obtained in question 1 are merely for information purposes.

It should be noted that the sample size for each cereal was not the same. Although an equal number of samples of each cereal type were presented to participants, due to participant preference, not all samples were consumed. Participants were allowed to choose which cereal(s) they wished to taste. Some samples were consumed without a questionnaire being completed, due to participant unwillingness to complete the form, or an inability to complete the form (e.g., too young, language barrier, etc.).

VI. RECOMMENDATIONS

Ready-to-eat breakfast cereals are a significant component of many food packages provided to the household food assistance participants. Households with children especially benefit from the fortified breakfast cereals, but only if the cereals are consumed. Many comments from participants and program managers indicated a significant level of dissatisfaction with some of the cereal provided, in particular the Company A product. Some of the sites that were visited had significant amounts of the cereal in storage that was rejected by their participants. Cereal that is not accepted by the participants often will exceed its shelf-life and have to be discarded. This is a waste of food assistance dollars.

One recommendation is that only commercial labeling be allowed for RTE cereals. This simple step would help change the perception that commodity cereals are somehow different or lesser quality than cereal in the retail grocery stores. It would also allow vendors opportunity to have their company associated with high quality cereals provided through food assistance programs.

The current bid system procures cereals based on the lowest available cost. However, it must be noted that lowest cost does not always translate into best value. When products are not utilized, or encounter significant problems, the value of the commodity is decreased. Government procurement regulations are encouraging best value procurement where possible to ensure the best utilization of Federal dollars. Based on the past history of the cereals, and the results of the sensory evaluations, it is recommended that procurement specifications be amended to include a consumer acceptability requirement. This may include requiring vendors to demonstrate consumer acceptability on the general market through sensory testing by private companies, or allowing for product review when customer complaints reach a significant level. There should also be a concerted effort to convert the current procurement specification for RTE cereal to a more performance-based specification. These steps would move the procurement of RTE cereals closer to a best value procurement system and ensure that the food provided to recipients is not just safe, but is of good quality as well. Best value procurement should weigh heavily in the procurement of food products to ensure that not only are people provided food, but that they are provided food that is acceptable and will be consumed by their families.

APPENDIX A

**Complaint Letters
Ready-to-eat Cereals
FY 2000**

APPENDIX B

Participant Survey Sensory Questionnaire